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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,091	10/22/2003	Chandra Sekhar Namuduri	GP-303337	4786

7590 01/27/2005

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EXAMINER

SCHWARTZ, CHRISTOPHER P

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,091

Applicant(s)

NAMUDURI ET AL.

Examiner

Christopher P. Schwartz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-452)
- 6) ☐ Other: ____.

Christopher P. Schwartz
CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER

DETAILED ACTION

Information Disclosure Statement

1. The supplemental information disclosure statement has been received and considered.
2. Applicant's response filed 11/2/04 has been received and considered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
5. Claims 1-5,8,10-14,17,19,20,21 rejected under 35 U.S.C. 103(a) as being unpatentable over Lou et al. in view of Carlson '239.

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Regarding claims 1,12,21 Lou et al. discloses a screw type fluid damper as broadly claimed including thrust shaft 41 having a screw nut mechanism (see the discussion in col. 4 in threaded communication with a sealed housing 29. Note the rotor 26 which is connected to a threaded surface of the shaft 41 via the ball screw mechanism at 11 and the stator at 29. The stator and rotor elements 26,29 are considered to also comprise the interleaved plates which are also connected indirectly to the shaft and housing.

Lou et al. However lacks using a magnetorheological fluid as the damping medium.

However, it is known to substitute magnetorheological fluids for electrorheological fluids simply dependent upon the damping properties desired or for convenience.

Carlson '239 teaches a magnetorheological fluid devices are well known in the art. See the discussion in column 5 lines 5-11. Note also the use of permanent magnets in the several embodiments (see elements 60 and 242) and the magnetic field lines in figures 16 and 28. It is known in the art to interchange electromagnets/coils with permanent magnets dependent upon cost, desired field strength, desired safety conditions, power consumption required, etc.

The ordinary skilled worker in the art at the time of the invention would have found it obvious to have modified the stator elements of Lou et al. to include permanent magnets for generating a magnetic field in a magnetorheological fluid as claimed since

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the substitution of a magnetorheological fluid for an electrorheological fluid is known in the art (see Carlson col. 5 lines 5-11 and 22-27).

Regarding claims 2-5,8,14,17 these limitations are fairly suggested by the combined teaching of Lou et al., as modified by Carlson.

Regarding claims 10,11,13,19,20 to have spaced the rotor and stator plate elements of Lou et al., as modified, or to have varied their respective numbers, to the claimed dimensions and requirements would have been obvious dependent upon the desired shear force (i.e. level of rotational damping desired).

6. Claims 6,7,9,15,16,18 rejected under 35 U.S.C. 103(a) as being unpatentable over Lou et al. in view of Carlson '239 as applied to claim1 above, and further in view of Weiss et al. '184.

Regarding claim 6,15 note Carlson in col 5 describes known types of magnetorheological fluids which may be used. One of these such fluids is to Weiss et al.

Weiss et al. '184 (same inventor, different patent number) teaches such a fluid.

One having ordinary skill in the art at the time of the invention would have found it obvious to have selected the fluid of '184 simply dependent upon the damping properties desired.

Regarding claims 7,9,16,18 such a selection of fluid with the claimed properties would simply amount to an alternate equivalent selection taught by Lou et al., as modified by Carlson and Weiss et al. '184, dependent upon the damping characteristics desired.

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7. Claims 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Namuduri et al. in view of Gordaninejad et al..

Regarding claim 22 Namuduri et al. discloses a shock absorber similar to applicants in figure 4A.

Namuduri et al. Lacks a specific showing of the claimed shape of flow channels.

Gordaninejad et al. Teaches that such shapes are known in the art (see col. 8 lines 25-32).

To have modified the flow passages of the piston shown in figure 4A of Namuduri et al. with either of the claimed shapes, as required in claim 22 , would have been obvious to the ordinary skilled worker in the art, as suggested by Gordaninejad et al., simply dependent upon the damping characteristics desired.

Response to Arguments

8. Applicant's arguments filed 11/2/04 have been fully considered but they are not persuasive. Applicant's have made no attempt to amend the claims to define over the prior art of record. This seems to be a continuing re-occurrence with applicant's.

Applicant's argue in their response that if the rotor electrodes are indirectly connected to the shaft they cannot each have a centrally located aperture that is rotatably engaged with the threaded surface of the thrust shaft. Applicants also contend that if the stator electrodes are indirectly connected to the housing they cannot be fixedly attached to the housing and comprise a centrally located aperture dimensioned to accommodate vertical movement of the thrust shaft. It is unclear where these

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arguments find themselves in the form of limitations in all of the referenced independent claims.

As explained in the Office Action (and as noted by applicants) the rotor plates 21 are indirectly rotatably engaged with the shaft 41 via rotor element 26 and the stator plates 22, connected to housing 29, have a centrally located aperture to accommodate the thrust shaft.

Applicant's arguments are more specific than the limitations found in the claims.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

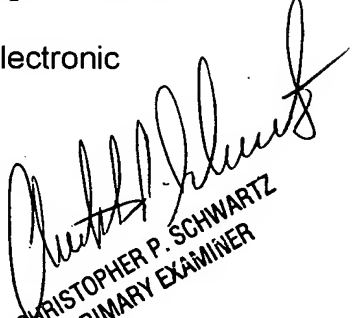
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Schwartz whose telephone number is 703-308-0576. The examiner can normally be reached on M-F 9:30-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Dave Bucci can be reached on 703-308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cps
1/23/05


CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER